

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Jae-Sun CHA et al. **ART UNIT:** 2617
APPLICATION NO.: 10/588,248 **EXAMINER:** Pierre Louis DESIR
FILING DATE: April 30, 2007 **DATED:** November 14, 2011
FOR: **HANDOVER METHOD IN WIRELESS PORTABLE INTERNET
SYSTEM**

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APPELLANTS' REPLY BRIEF

Sir:

In response to the Examiner's Answer mailed September 13, 2011, Appellants respectfully submit that based on at least the arguments provided in the Appeal Brief originally submitted July 20, 2011, Claims 20-35 are patentable over the applied reference. The following comments are respectfully submitted in order to address statements made in the Examiner's Answer.

Claim 20 recites a method of performing a handover on a subscriber station in a target base station. A ranging request message including a base station identifier of a previous serving base station is received from the subscriber station when a drop situation is detected by the subscriber station. Information of the subscriber station is acquired through the base station identifier of the previous serving base station. A response message on the ranging request message is transmitted to the subscriber station. Network re-entry is performed on the subscriber station.

In the Response to Arguments provided in the Appeal Brief, the Examiner first addresses Appellants' assertion that "Inter-BS communication for IEEE 802.16e Handoff," 2003-05-14 to *Koo et al.* (hereinafter, *Koo*) fails to disclose the detection of a drop situation by the subscriber station.

The Examiner contends that a "drop situation" may be interpreted as both "no connection" and a "decrease on connection." Thus, the Examiner relates the measurement of S/R at the Mobile Station (MS) in *Koo* to the detection of a drop situation at the subscriber station in Claim 1.

Throughout the current Specification, a "drop" situation, state and phenomena are terms used to indicate that communication between a subscriber station and a base station is interrupted. Accordingly, the subscriber station must re-enter a network via a target base station. Further, Claim 20 recites "a previous serving base station", which indicates that connection with the previous service base station has ceased when the drop situation is detected and the ranging request message is sent.

The term "drop" is commonly used by those skilled in the art to indicate that a connection or call has been terminated or lost. Accordingly, a "drop situation" that is detected by a subscriber station is known by those skilled in the art to refer to a situation in which the subscriber station has lost a connection. Those skilled in the art would not equate a "drop situation" at a subscriber station with a "decrease on connection" as the Examiner contends.

The detection of an S/R in *Koo* relates to a currently established communication session. Further, *Koo* only describes a detection of an S/R, and fails to teach the "decrease" the Examiner relies upon. Thus, the Examiner relies upon an interpretation of "drop situation" that is not supported by the Specification, claims and those skilled in the art, and a "decrease on connection" that is inferred from the teachings of *Koo*, in rejecting this element of Claim 20. Therefore, *Koo* fails to disclose the detection of a drop situation by the subscriber station, as recited in Claim 20.

The Examiner also addresses Appellants' assertion that *Koo* fails to provide any disclosure indicating that the ranging request message from the subscriber station includes a base station identifier of a previous serving base station. The Examiner maintains that, based on the teachings of *Koo*, it is obvious for a base station identifier to be included in the ranging request message.

Koo teaches that a HO-notification from a serving BS provides identifiers of both the serving BS and the MS, as well as an estimated handover time. Accordingly, the HO-notification provides a mapping of the serving BS and the MS, to the target BS. *Koo* also teaches that a ranging request is transmitted from the MS to the target BS. Accordingly, through the teachings of *Koo*, the target BS would be able to map the MS to a serving BS based on the HO-notification received from the serving BS.

The Examiner maintains that there would be some expectation to also include the identifier of the serving BS in the ranging request, since the target BS would need to map the identifier of the MS with the identifier of the serving BS to acquire information related to the mobile station. Appellants respectfully disagree. The teachings of *Koo* would not require the identifier of the serving BS in the ranging request, because the mapping between the identifiers of the serving BS and the MS has already been provided to the target BS through the HO-notification. Accordingly, there would be no expectation to also include the identifier of the serving BS in the ranging request of *Koo* because such a mapping would be redundant.

Further, the teaching of *Koo* only relates to an identifier of a BS that currently serves the MS, and fails to provide any disclosure relating to an identifier of a previous serving BS. As such, *Koo* teaches that only the serving BS provides the target BS with the identifier of the serving BS, and teaches away from the inclusion of a previous serving BS-ID in the ranging request from the subscriber station, as recited in Claim 20.

The Examiner statement regarding "some expectation to also include the serving BS-ID" is a general conclusory statement, and the Examiner has failed to provide any rational reasoning that

supports this assertion. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval).

Koo fails to teach, suggest or render obvious the reception of a ranging request message, which includes a base station identifier of a previous serving base station, at a target base station from a subscriber station when a drop situation is detected by the subscriber station, as recited in Claim 20. Thus, Claim 20 is patentable over *Koo*.

The Examiner also rejected independent Claims 24, 27, 30 and 33 under 35 U.S.C. §103(a). Appellants assert that Claims 24, 27, 30 and 33 are patentable for at least the reasons presented above with regard to Claim 20, and as described in Appellants' Appeal Brief.


Claims 21-23, 25, 26, 28, 29, 31, 32, 34 and 35 are patentable at least by virtue of their respective dependency from independent Claims 20, 24, 27, 30 and 33. Accordingly, Appellants assert that Claims 20-35 are allowable over *Koo*, and respectfully request withdrawal of the rejection under 35 U.S.C. §103(a).

It is well settled that in order for a rejection under 35 U.S.C. §103(a) to be appropriate, the claimed invention must be shown to be obvious in view of the prior art as a whole. A claim may be found to be obvious if it is first shown that all of the recitations of a claim are taught in the prior art or are suggested by the prior art. *In re Royka*, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974), cited in M.P.E.P. §2143.03.

The Examiner has failed to show that all of the recitations of Claims 20-35 are taught, suggested or rendered obvious by the art of record, or the combination thereof. Accordingly, the Examiner has failed to make out a prima facie case for an obviousness rejection.

As the Examiner has failed to make out a prima facie case for the obviousness rejection, the rejections of Claims 20-35 must be reversed.

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